





MiTek USA, Inc.  
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661  
Telephone 916-755-3571

Re: 2001566  
YAVAPAI COUNTY 2 BDRM

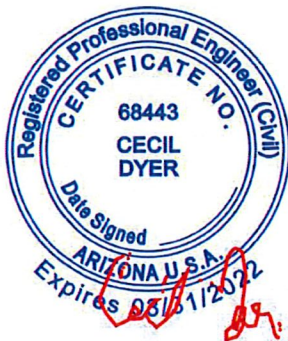
The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Western Truss.

Pages or sheets covered by this seal: R63988731 thru R63988751

My license renewal date for the state of Arizona is March 31, 2022.

Arizona COA: 11906-0

Lumber design values are in accordance with ANSI/TPI 1 section 6.3  
These truss designs rely on lumber values established by others.



October 8, 2020

Dyer, Cecil

**IMPORTANT NOTE:** The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

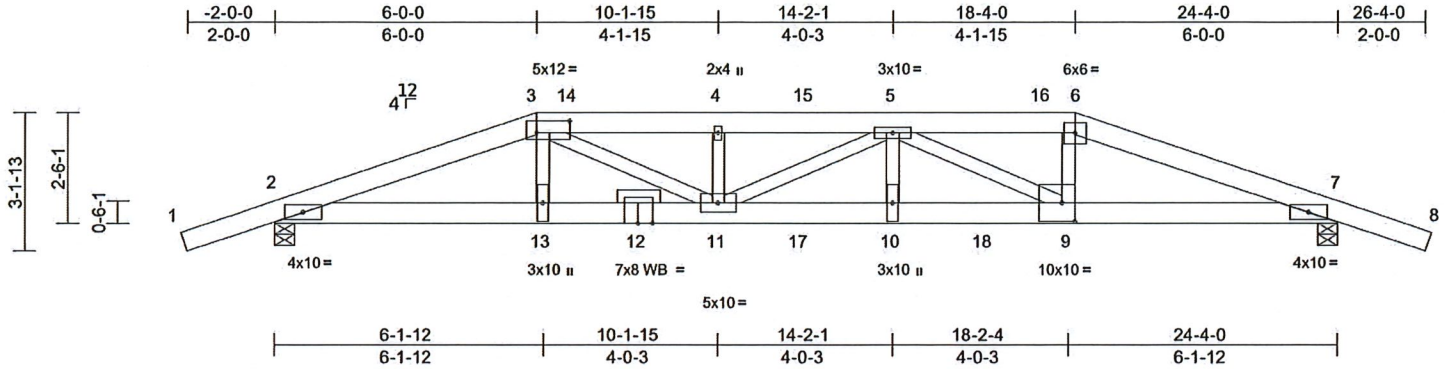
REVIEWED FOR  
DESIGN CRITERIA  
ONLY

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988731
2001566	A01	Hip Girder	1	2	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:08  
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Page: 1



Scale = 1:50.5

Plate Offsets (X, Y): [3:0-9-0,0-3-4], [9:0-3-8,0-5-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.40	10-11	>719	240	MT20	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	1.00	Vert(CT)	-0.56	10-11	>512	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.13	7	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0											
											Weight: 237 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x6 SPF 1650F 1.5E  
WEBS 2x4 SPF 1650F 1.5E  
OTHERS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-10-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-5-8, 7=0-5-8  
Max Horiz 2=-51 (LC 7)  
Max Uplift 2=-693 (LC 6), 7=-694 (LC 7)  
Max Grav 2=4202 (LC 17), 7=4204 (LC 18)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

#### TOP CHORD

1-2=0/101, 2-3=-10626/1525,  
3-14=-13835/2018, 4-14=-13835/2018,  
4-15=-13834/2018, 5-15=-13834/2018,  
5-16=-10189/1493, 6-16=-10190/1493,  
6-7=-10636/1526, 7-8=0/101

#### BOT CHORD

2-13=-1391/9964, 12-13=-1398/10047,  
11-12=-1398/10047, 11-17=-1923/13779,  
10-17=-1923/13779, 10-18=-1923/13779,  
9-18=-1923/13779, 7-9=-1351/9973  
3-13=-103/1170, 3-11=-634/4219,  
4-11=-610/139, 5-11=-117/170,  
5-10=-147/1178, 5-9=-4029/611,  
6-9=-385/3033

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 3-13 2x4 - 1 row at 0-2-0 oc, Except member 6-9 2x4 - 1 row at 0-2-0 oc, member 4-11 2x4 - 1 row at 0-4-0 oc, member 5-10 2x4 - 1 row at 0-4-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 693 lb uplift at joint 2 and 694 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 976 lb down and 166 lb up at 6-0-0, 429 lb down and 81 lb up at 8-0-12, 429 lb down and 81 lb up at 10-0-12, 858 lb down and 162 lb up at 12-0-12, 429 lb down and 81 lb up at 14-3-4, and 429 lb down and 81 lb up at 16-3-4, and 976 lb down and 166 lb up at 18-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-110, 3-6=-110, 6-8=-110, 2-7=-20  
Concentrated Loads (lb)  
Vert: 12=-429 (F), 13=-976 (F), 11=-429 (F), 10=-429 (F), 9=-976 (F), 17=-858 (F), 18=-429 (F)



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



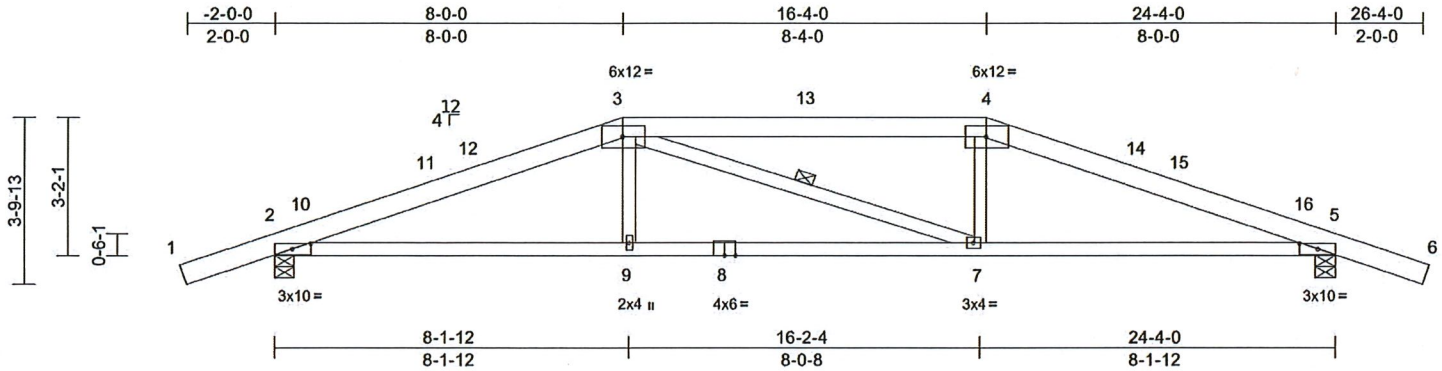
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988732
2001566	A02	Hip	1	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:10  
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Page: 1



Scale = 1:50.5

Plate Offsets (X, Y): [2:0-5-2,0-1-8], [5:0-5-2,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.20	7-9	>999	240	MT20	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.35	7-9	>821	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.12	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0											
											Weight: 94 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-7

#### REACTIONS

(size) 2=0-5-8, 5=0-5-8  
Max Horiz 2=-63 (LC 15)  
Max Uplift 2=-319 (LC 10), 5=-319 (LC 11)  
Max Grav 2=2074 (LC 35), 5=2074 (LC 35)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/89, 2-10=-3668/487, 10-11=-3642/502,  
11-12=-3524/504, 3-12=-3501/519,  
3-13=-3327/538, 4-13=-3327/538,  
4-14=-3507/521, 14-15=-3531/507,  
15-16=-3649/504, 5-16=-3675/490, 5-6=0/89

BOT CHORD 2-9=-378/3317, 8-9=-373/3326,  
7-8=-373/3326, 5-7=-393/3323

WEBS 3-9=0/328, 3-7=-362/371, 4-7=0/328

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=33ft; Cat.  
II; Exp C; Enclosed; Hip Roof; Hip Truss; MWFRS  
(envelope) exterior zone and C-C Exterior(2E) 2-0-14 to  
0-11-2, Interior (1) 0-11-2 to 8-0-0, Exterior(2R) 8-0-0 to  
12-2-15, Interior (1) 12-2-15 to 16-4-0, Exterior(2R)  
16-4-0 to 20-6-15, Interior (1) 20-6-15 to 26-4-14  
zone; C-C for members and forces & MWFRS for  
reactions shown; Lumber DOL=1.33 plate grip  
DOL=1.33

- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate  
DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0;  
Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this  
design.
- 4) This truss has been designed for greater of min roof live  
load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on  
overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 40.0psf  
on the bottom chord in all areas where a rectangle  
3-06-00 tall by 2-00-00 wide will fit between the bottom  
chord and any other members.
- 8) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 319 lb uplift at  
joint 2 and 319 lb uplift at joint 5.
- 9) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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**Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



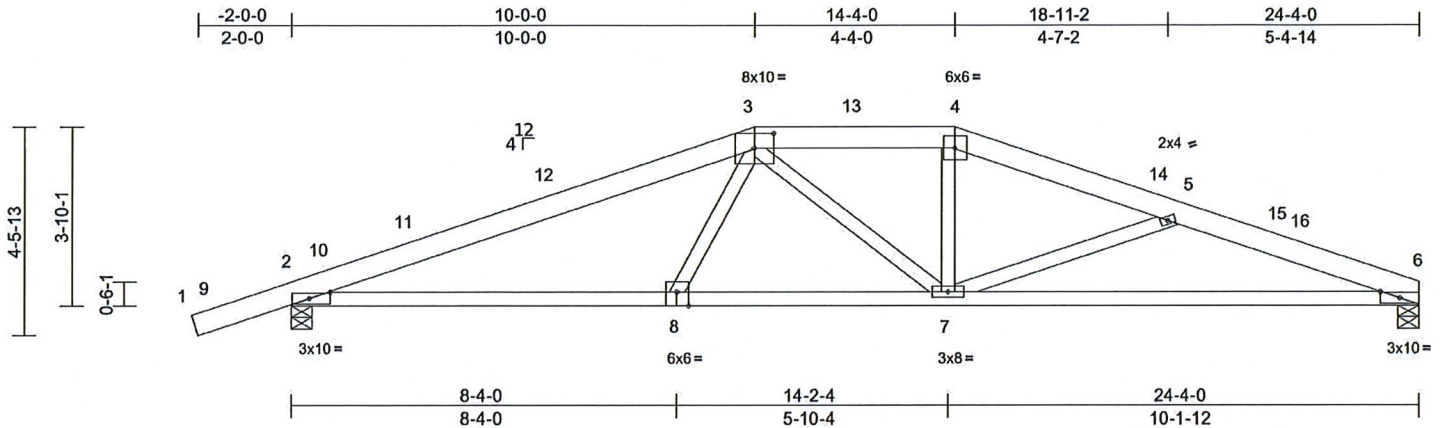
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988733
2001566	A03	Hip	2	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:10  
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Page: 1



Scale = 1:47.6

Plate Offsets (X, Y): [2:0-5-6,0-1-8], [3:0-5-0,0-3-13], [6:0-5-2,0-1-8], [8:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.25	2-8	>999	240	MT20	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.90	Vert(CT)	-0.44	6-7	>656	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.82	Horz(CT)	0.13	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0											
											Weight: 94 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E \*Except\* 1-3;2x6 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied.  
BOT CHORD Rigid ceiling directly applied or 9-5-1 oc bracing.

#### REACTIONS

(size) 2=0-5-8, 6=0-5-8  
Max Horiz 2=86 (LC 18)  
Max Uplift 2=-309 (LC 10), 6=-198 (LC 11)  
Max Grav 2=2304 (LC 35), 6=1900 (LC 35)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-9=0/19, 2-9=0/89, 2-10=-3582/472,  
10-11=-3530/482, 11-12=-3320/493,  
3-12=-3287/511, 3-13=-2946/511,  
4-13=-2946/511, 4-14=-3080/508,  
5-14=-3212/492, 5-15=-4161/657,  
15-16=-4188/649, 6-16=-4301/639  
BOT CHORD 2-8=-390/3130, 7-8=-421/3043,  
6-7=-564/3947  
WEBS 3-8=0/294, 3-7=-407/288, 4-7=-29/605,  
5-7=-1091/231

#### NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat.  
II; Exp C; Enclosed; Hip Roof; Hip Truss; MWFRS  
(envelope) exterior zone and C-C Exterior(2E) 2-0-14 to  
0-11-2, Interior (1) 0-11-2 to 10-0-0, Exterior(2E) 10-0-0  
to 14-4-0, Exterior(2R) 14-4-0 to 18-6-15, Interior (1)  
18-6-15 to 24-1-4 zone;C-C for members and forces &  
MWFRS for reactions shown; Lumber DOL=1.33 plate  
grip DOL=1.33

- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 198 lb uplift at joint 6 and 309 lb uplift at joint 2.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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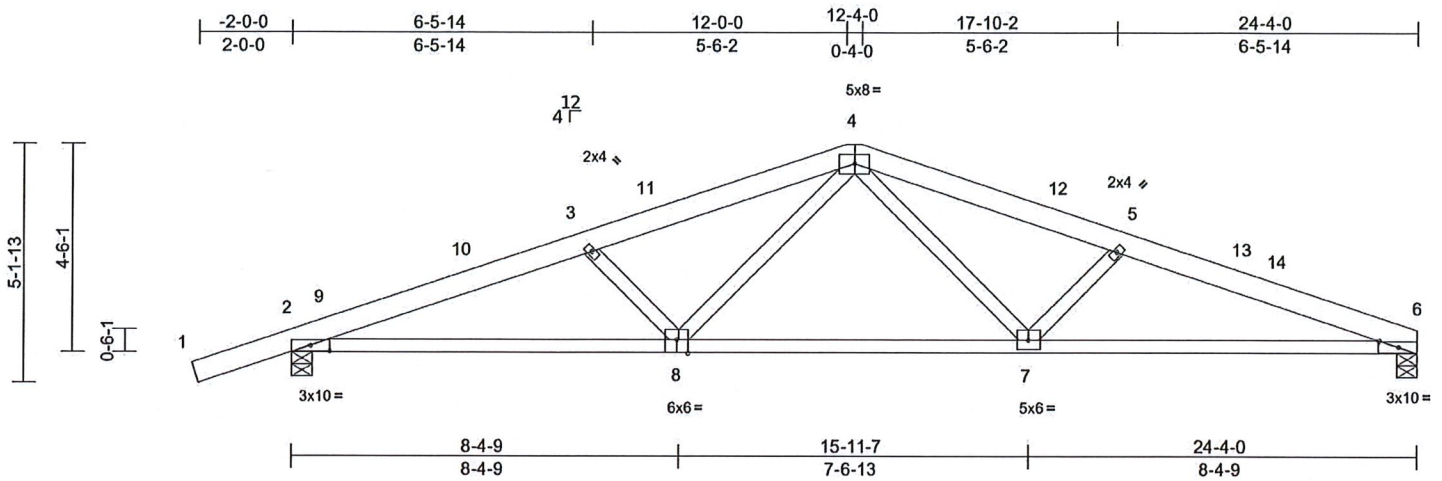
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988734
2001566	A04	Hip	2	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:10  
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Page: 1



Scale = 1:47.7

Plate Offsets (X, Y): [2:0-5-2,0-1-8], [6:0-5-2,0-1-8], [8:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.32	Vert(LL)	-0.17	7-8	>999	240	MT20	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.31	7-8	>938	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.11	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0											
											Weight: 94 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-2-10 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 6=0-5-8  
Max Horiz 2=99 (LC 18)  
Max Uplift 2=-294 (LC 10), 6=-183 (LC 11)  
Max Grav 2=1884 (LC 21), 6=1613 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/61, 2-9=-3666/534, 9-10=-3552/534, 3-10=-3525/556, 3-11=-3063/477, 4-11=-2913/493, 4-12=-2982/509, 5-12=-3136/489, 5-13=-3621/572, 13-14=-3649/559, 6-14=-3739/558

BOT CHORD 2-8=-466/3337, 7-8=-269/2218, 6-7=-471/3443

WEBS 4-7=-106/1111, 5-7=-898/233, 4-8=-88/1038, 3-8=-840/218

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Hip Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) 2-0-14 to 0-11-2, Interior (1) 0-11-2 to 12-2-0, Exterior(2R) 12-2-0 to 16-4-15, Interior (1) 16-4-15 to 24-1-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 6 and 294 lb uplift at joint 2.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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October 8, 2020

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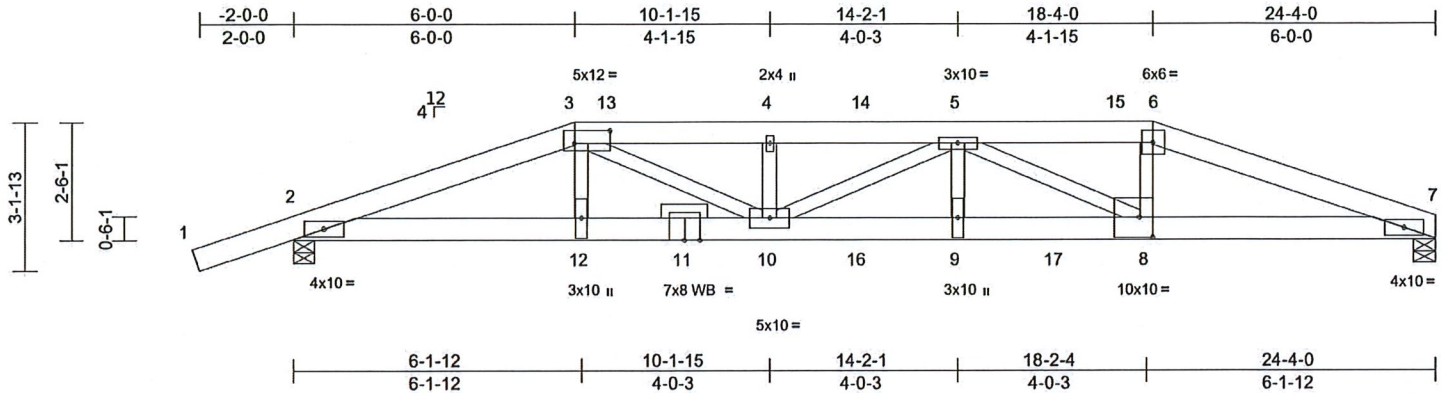
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988735
2001566	A05	Hip Girder	1	2	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:11  
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Scale = 1:47

Plate Offsets (X, Y): [3:0-9-0,0-3-4], [8:0-3-8,0-5-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.38	9-10	>764	240	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.53	9-10	>543	180	
TCDL	15.0	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.12	7	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH							
BCDL	10.0										
Weight: 230 lb FT = 20%											

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x6 SPF 1650F 1.5E \*Except\* 11-7:2x6 SPF 2100F 1.8E  
WEBS 2x4 SPF 1650F 1.5E  
OTHERS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-10-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-5-8, 7=0-5-8  
Max Horiz 2=66 (LC 6)  
Max Uplift 2=-695 (LC 6), 7=-583 (LC 7)  
Max Grav 2=4208 (LC 17), 7=3939 (LC 18)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/101, 2-3=-10653/1531,  
3-13=-13824/2026, 4-13=-13824/2026,  
4-14=-13824/2026, 5-14=-13824/2026,  
5-15=-10242/1554, 6-15=-10243/1554,  
6-7=-10734/1588  
BOT CHORD 2-12=-1411/9990, 11-12=-1418/10074,  
10-11=-1418/10074, 10-16=-1962/13843,  
9-16=-1962/13843, 9-17=-1962/13843,  
8-17=-1962/13843, 7-8=-1439/10025  
WEBS 3-12=-106/1189, 3-10=-640/4176,  
4-10=-591/143, 5-10=-116/124,  
5-9=-147/1194, 5-8=-4041/609,  
6-8=-387/3045

#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 3-12 2x4 - 1 row at 0-2-0 oc, Except member 6-8 2x4 - 1 row at 0-2-0 oc, member 4-10 2x4 - 1 row at 0-4-0 oc, member 5-9 2x4 - 1 row at 0-4-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 583 lb uplift at joint 7 and 695 lb uplift at joint 2.

- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 976 lb down and 166 lb up at 6-0-0, 429 lb down and 81 lb up at 8-0-12, 429 lb down and 81 lb up at 10-0-12, 858 lb down and 162 lb up at 12-0-12, 429 lb down and 81 lb up at 14-3-4, and 429 lb down and 81 lb up at 16-3-4, and 976 lb down and 166 lb up at 18-3-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- LOAD CASE(S) Standard**
- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-110, 3-6=-110, 6-7=-110, 2-7=-20  
Concentrated Loads (lb)  
Vert: 11=-429 (B), 12=-976 (B), 10=-429 (B), 9=-429 (B), 8=-976 (B), 16=-858 (B), 17=-429 (B)



REVIEWED FOR ARIZONA U.S.A.  
DESIGN CRITERIA ONLY  
October 8, 2020

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



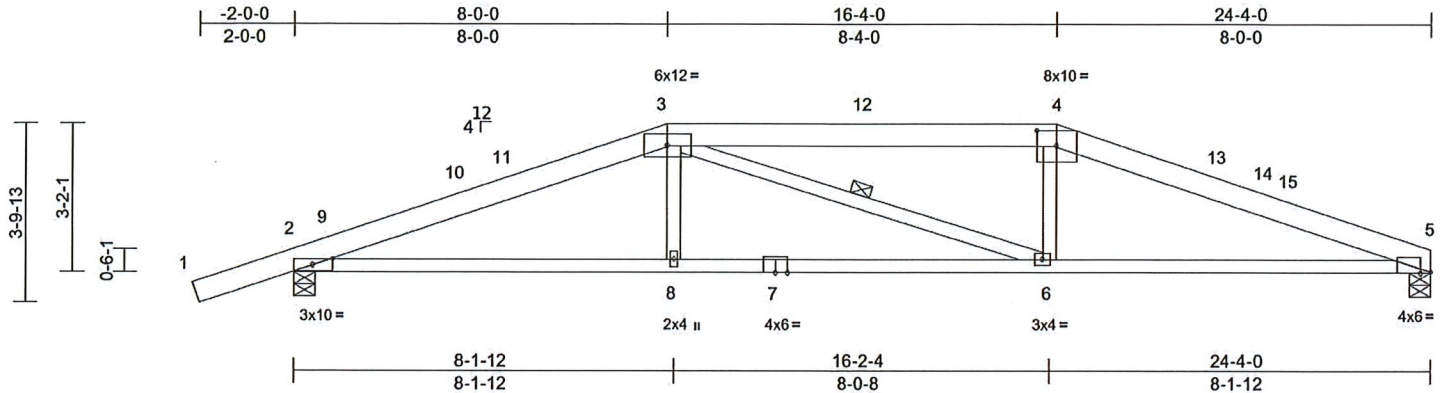
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988736
2001566	A06	Hip	1	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

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Scale = 1:47.2

Plate Offsets (X, Y): [2:0-5-2,0-1-8], [4:0-5-0,0-3-13], [5:0-2-10,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.15	TC	0.87	Vert(LL)	-0.21	5-6	>999	240	MT20	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.35	5-6	>812	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.37	Horz(CT)	0.12	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0											
Weight: 90 lb											FT = 20%	

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-6

#### REACTIONS

(size) 2=0-5-8, 5=0-5-8  
Max Horiz 2=73 (LC 14)  
Max Uplift 2=321 (LC 10), 5=209 (LC 11)  
Max Grav 2=2092 (LC 35), 5=1688 (LC 35)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-2=0/89, 2-9=-3685/516, 9-10=-3659/530,  
10-11=-3540/533, 3-11=-3517/547,  
3-12=-3413/567, 4-12=-3413/567,  
4-13=-3588/559, 13-14=-3623/542,  
14-15=-3624/542, 5-15=-3727/539

BOT CHORD 2-8=-441/3332, 7-8=-436/3341,  
6-7=-436/3341, 5-6=-445/3410

WEBS 3-8=0/327, 3-6=-333/446, 4-6=0/326

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat.  
II; Exp C; Enclosed; Hip Roof; Hip Truss; MWFRS  
(envelope) exterior zone and C-C Exterior(2E) 2-0-14 to  
0-11-2, Interior (1) 0-11-2 to 8-0-0, Exterior(2R) 8-0-0 to  
12-2-15, Interior (1) 12-2-15 to 16-4-0, Exterior(2R)  
16-4-0 to 20-6-15, Interior (1) 20-6-15 to 24-1-4 zone;C-  
C for members and forces & MWFRS for reactions  
shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate  
DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0;  
Cs=1.00; Ct=1.10

- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) Provide adequate drainage to prevent water ponding.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 209 lb uplift at joint 5 and 321 lb uplift at joint 2.
- 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Western Truss & Components, Flagstaff, AZ - 86004, Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:11 Page: 1  
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<b>LUMBER</b>		2) TCLL: ASCE 7-16; P=4.00 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10	Concentrated Loads (lb) Vert: 4=-118 (F), 6=-118 (F)
<b>TOP CHORD</b>	2x6 SPF 1650F 1.5E		2) Dead + 0.75 Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
<b>BOT CHORD</b>	2x4 SPF 1650F 1.5E		Uniform Loads (lb/ft) Vert: 1-5=-90, 5-8=-90, 2-8=-20
<b>WEBS</b>	2x4 WW Stud/Std	3) Unbalanced snow loads have been considered for this design.	Concentrated Loads (lb) Vert: 4=-118 (F), 6=-118 (F)
<b>BRACING</b>		4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.	3) Dead + 0.75 Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15
<b>TOP CHORD</b>	Structural wood sheathing directly applied or 3-11-14 oc purlins.	5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.	Uniform Loads (lb/ft) Vert: 1-12=-90, 5-12=-122, 5-8=-48, 2-8=-20
<b>BOT CHORD</b>	Rigid ceiling directly applied or 10-0-0 oc bracing.	6) * This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.	Concentrated Loads (lb) Vert: 4=-118 (F), 6=-118 (F)
<b>WEBS</b>	1 Row at midpt 4-6	7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 65 lb uplift at joint 8 and 177 lb uplift at joint 2.	4) Dead + 0.75 Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15
<b>REACTIONS</b>	(size) 2=0-5-8, 8=0-5-8 Max Horiz 2=99 (LC 18) Max Uplift 2=-177 (LC 10), 8=-65 (LC 11) Max Grav 2=2002 (LC 21), 8=1730 (LC 22)	8) This truss is designed in accordance with the 2018 International Residential Code sections R502.1.1 and R802.10.2 and referenced standard ANSI/TPI 1.	Uniform Loads (lb/ft) Vert: 1-5=-48, 5-15=-122, 8-15=-90, 2-8=-20
<b>FORCES</b>	(lb) - Maximum Compression/Maximum Tension	9) Load case(s) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 has/have been modified. Building designer must review loads to verify that they are correct for the intended use of this truss.	Concentrated Loads (lb) Vert: 4=-118 (F), 6=-118 (F)
<b>TOP CHORD</b>	1-2=0/61, 2-11=-3977/182, 11-12=-3862/182, 3-12=-3836/204, 3-13=-3367/132, 4-13=-3260/143, 4-5=-902/85, 5-6=-893/94, 6-14=-3301/164, 7-14=-3436/150, 7-15=-3940/226, 15-16=-3968/213, 8-16=-4058/213	10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 118 lb down at 14-2-0, and 118 lb down at 10-2-0 on top chord. The design/selection of such connection device (s) is the responsibility of others.	
<b>BOT CHORD</b>	2-10=-134/3628, 9-10=0/2821, 8-9=-146/3742	11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).	
<b>WEBS</b>	7-9=-942/246, 3-10=-858/225, 4-10=-75/861, 4-6=-1948/77, 6-9=-95/941	<b>LOAD CASE(S)</b> Standard	
<b>NOTES</b>		1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15	
1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCdL=6.0psf; BCdL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Common Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 12-2-0, Exterior(2R) 12-2-0 to 16-4-15, Interior (1) 16-4-15 to 24-1-4 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33		Uniform Loads (lb/ft) Vert: 1-5=-110, 5-8=-110, 2-8=-20	




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DESIGN CRITERIA  
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ARIZONA U.S.A.  
03/31/2022  
October 8, 2020

Continued on page 2

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MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Riverside, CA 92504

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988737
2001566	A07	Common	4	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

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- 5) Dead + Uninhabitable Attic Without Storage: Lumber Increase=1.25, Plate Increase=1.25  
Uniform Loads (lb/ft)  
Vert: 1-5=-30, 5-8=-30, 2-8=-40  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 6) Dead + 0.6 C-C Wind (Pos. Internal) Case 1: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=69, 2-11=41, 5-11=29, 5-14=39, 8-14=29, 2-8=-12  
Horz: 1-2=-81, 2-11=-53, 5-11=-41, 5-14=51, 8-14=41  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 7) Dead + 0.6 C-C Wind (Pos. Internal) Case 2: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=23, 2-13=29, 5-13=39, 5-16=29, 8-16=41, 2-8=-12  
Horz: 1-2=-35, 2-13=-41, 5-13=-51, 5-16=41, 8-16=53  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 8) Dead + 0.6 C-C Wind (Neg. Internal) Case 1: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-20, 2-5=-47, 5-8=-47, 2-8=-20  
Horz: 1-2=-10, 2-5=17, 5-8=-17  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 9) Dead + 0.6 C-C Wind (Neg. Internal) Case 2: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-40, 2-5=-47, 5-8=-47, 2-8=-20  
Horz: 1-2=10, 2-5=17, 5-8=-17  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 10) Dead + 0.6 MWFRS Wind (Pos. Internal) Left: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=46, 2-5=31, 5-8=18, 2-8=-12  
Horz: 1-2=-58, 2-5=-43, 5-8=30  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 11) Dead + 0.6 MWFRS Wind (Pos. Internal) Right: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=11, 2-5=18, 5-8=31, 2-8=-12  
Horz: 1-2=-23, 2-5=-30, 5-8=43  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 12) Dead + 0.6 MWFRS Wind (Neg. Internal) Left: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=7, 2-5=1, 5-8=-13, 2-8=-20  
Horz: 1-2=-37, 2-5=-31, 5-8=17  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 13) Dead + 0.6 MWFRS Wind (Neg. Internal) Right: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-7, 2-5=-13, 5-8=1, 2-8=-20  
Horz: 1-2=-23, 2-5=-17, 5-8=31  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 14) Dead + 0.6 MWFRS Wind (Pos. Internal) 1st Parallel: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=25, 2-5=31, 5-8=13, 2-8=-12  
Horz: 1-2=-37, 2-5=-43, 5-8=25  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 15) Dead + 0.6 MWFRS Wind (Pos. Internal) 2nd Parallel: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=6, 2-5=13, 5-8=31, 2-8=-12  
Horz: 1-2=-18, 2-5=-25, 5-8=43  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 16) Dead + 0.6 MWFRS Wind (Pos. Internal) 3rd Parallel: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=12, 2-5=18, 5-8=7, 2-8=-12  
Horz: 1-2=-24, 2-5=-30, 5-8=19  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 17) Dead + 0.6 MWFRS Wind (Pos. Internal) 4th Parallel: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=1, 2-5=7, 5-8=18, 2-8=-12  
Horz: 1-2=-13, 2-5=-19, 5-8=30  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 18) Dead + 0.6 MWFRS Wind (Neg. Internal) 1st Parallel: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=7, 2-5=1, 5-8=-18, 2-8=-20  
Horz: 1-2=-37, 2-5=-31, 5-8=12  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 19) Dead + 0.6 MWFRS Wind (Neg. Internal) 2nd Parallel: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-12, 2-5=-18, 5-8=1, 2-8=-20  
Horz: 1-2=-18, 2-5=-12, 5-8=31  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 20) Dead + Snow on Overhangs: Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-2=-110, 2-5=-30, 5-8=-30, 2-8=-20  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 21) Dead + Snow (Unbal. Left): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-12=-110, 5-12=-153, 5-8=-54, 2-8=-20  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 22) Dead + Snow (Unbal. Right): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-5=-54, 5-15=-153, 8-15=-110, 2-8=-20  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 23) Dead: Lumber Increase=0.90, Plate Increase=0.90 Plt. metal=0.90  
Uniform Loads (lb/ft)  
Vert: 1-5=-30, 5-8=-30, 2-8=-20  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 24) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Left): Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-62, 2-5=-67, 5-8=-77, 2-8=-20  
Horz: 1-2=-28, 2-5=-23, 5-8=13  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 25) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) Right): Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-73, 2-5=-77, 5-8=-67, 2-8=-20  
Horz: 1-2=-17, 2-5=-13, 5-8=23  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 26) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 1st Parallel): Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-62, 2-5=-67, 5-8=-81, 2-8=-20  
Horz: 1-2=-28, 2-5=-23, 5-8=9  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 27) Dead + 0.75 Snow (bal.) + 0.75(0.6 MWFRS Wind (Neg. Int) 2nd Parallel): Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=-76, 2-5=-81, 5-8=-67, 2-8=-20  
Horz: 1-2=-14, 2-5=-9, 5-8=23  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 28) Dead + 0.6 C-C Wind Min. Down: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-2=4, 2-5=-28, 5-8=-28, 2-8=-12  
Horz: 1-2=-16, 2-5=16, 5-8=-16  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)
- 29) Dead + 0.6 C-C Wind Min. Upward: Lumber Increase=1.33, Plate Increase=1.33  
Uniform Loads (lb/ft)  
Vert: 1-5=4, 5-8=4, 2-8=-12  
Horz: 1-5=-16, 5-8=16  
Concentrated Loads (lb)  
Vert: 4=-118 (F), 6=-118 (F)

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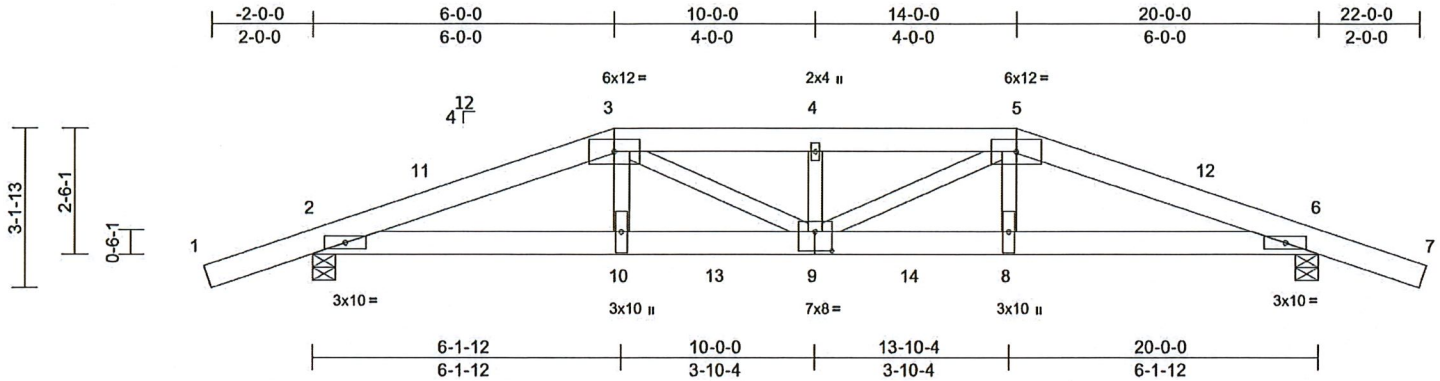
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988738
2001566	B01	Hip Girder	1	2	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:12  
ID:piER?T1S15mtkQbcykTODyYk5e-yd4CCiJkbBBEalq5gVfJB4E4XhPSS78fQq8yVl0r

Page: 1



Scale = 1:43.8

Plate Offsets (X, Y): [9:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.15	TC	0.22	Vert(LL)	-0.19	8-9	>999	240	MT20	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.55	Vert(CT)	-0.27	8-9	>881	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.73	Horz(CT)	0.07	6	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0											
Weight: 186 lb											FT = 20%	

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x6 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-5-8, 6=0-5-8  
Max Horiz 2=51 (LC 47)  
Max Uplift 2=541 (LC 6), 6=541 (LC 7)  
Max Grav 2=3321 (LC 31), 6=3321 (LC 31)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/101, 2-11=7908/1060,  
3-11=7776/1081, 3-4=8738/1265,  
4-5=8738/1265, 5-12=7776/1082,  
6-12=7908/1061, 6-7=0/101

BOT CHORD 2-10=970/7332, 10-13=978/7421,  
9-13=978/7421, 9-14=946/7421,  
8-14=946/7421, 6-8=938/7332

WEBS 3-10=115/1246, 3-9=271/1763,  
4-9=575/146, 5-9=273/1763, 5-8=114/1246

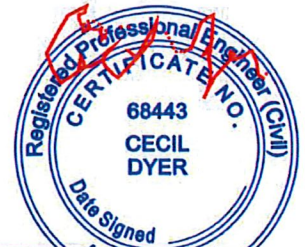
#### NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Web connected as follows: 2x4 - 1 row at 0-2-0 oc, Except member 3-9 2x4 - 1 row at 0-9-0 oc, Except member 5-9 2x4 - 1 row at 0-9-0 oc, member 4-9 2x4 - 1 row at 0-4-0 oc.

- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 541 lb uplift at joint 2 and 541 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 976 lb down and 166 lb up at 6-0-0, 429 lb down and 81 lb up at 8-0-12, 429 lb down and 81 lb up at 10-0-0, and 429 lb down and 81 lb up at 11-11-4, and 976 lb down and 166 lb up at 13-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-110, 3-5=-110, 5-7=-110, 2-6=-20  
Concentrated Loads (lb)  
Vert: 10=-976 (F), 9=-429 (F), 8=-976 (F), 13=-429 (F), 14=-429 (F)



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Page: 1

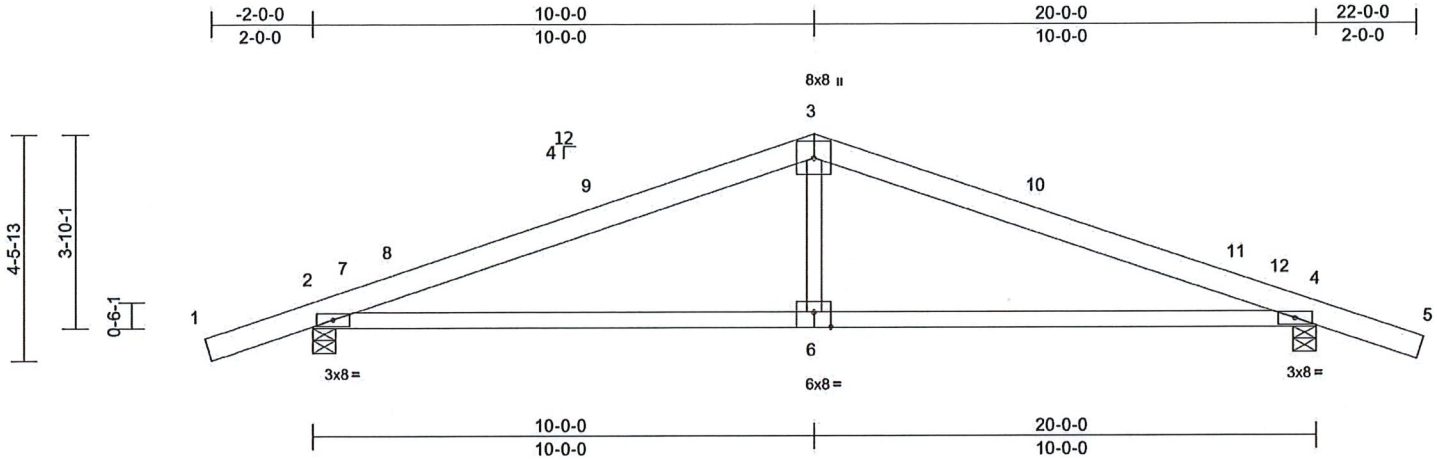
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988740
2001566	B03	Common	5	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:12  
ID:azB16Owp?Kd99UEtbZ4MXKyYk5n-yd4CCiJKbBBealxq5gVJBY\_E16hVsS78fQq8yVl0r

Page: 1



Scale = 1:44

Plate Offsets (X, Y): [6:0-4-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.86	Vert(LL)	-0.25	4-6	>947	240	MT20	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.71	Vert(CT)	-0.43	4-6	>540	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.06	4	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH								
BCDL	10.0											
											Weight: 72 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 2100F 1.8E  
BOT CHORD 2x4 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-5-8, 4=0-5-8  
Max Horiz 2=-75 (LC 15)  
Max Uplift 2=-260 (LC 10), 4=-260 (LC 11)  
Max Grav 2=1642 (LC 21), 4=1642 (LC 22)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/61, 2-7=-2247/308, 7-8=-2211/312, 8-9=-2078/329, 3-9=-2045/347, 3-10=-2045/347, 10-11=-2078/329, 11-12=-2211/312, 4-12=-2247/308, 4-5=0/61  
BOT CHORD 2-6=-191/1959, 4-6=-191/1959  
WEBS 3-6=0/421

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Common Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 10-0-0, Exterior(2R) 10-0-0 to 14-2-15, Interior (1) 14-2-15 to 22-0-14 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.

- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 260 lb uplift at joint 2 and 260 lb uplift at joint 4.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



REVIEWED FOR ARIZONA U.S.A.  
DESIGN CRITERIA ONLY  
October 8, 2020



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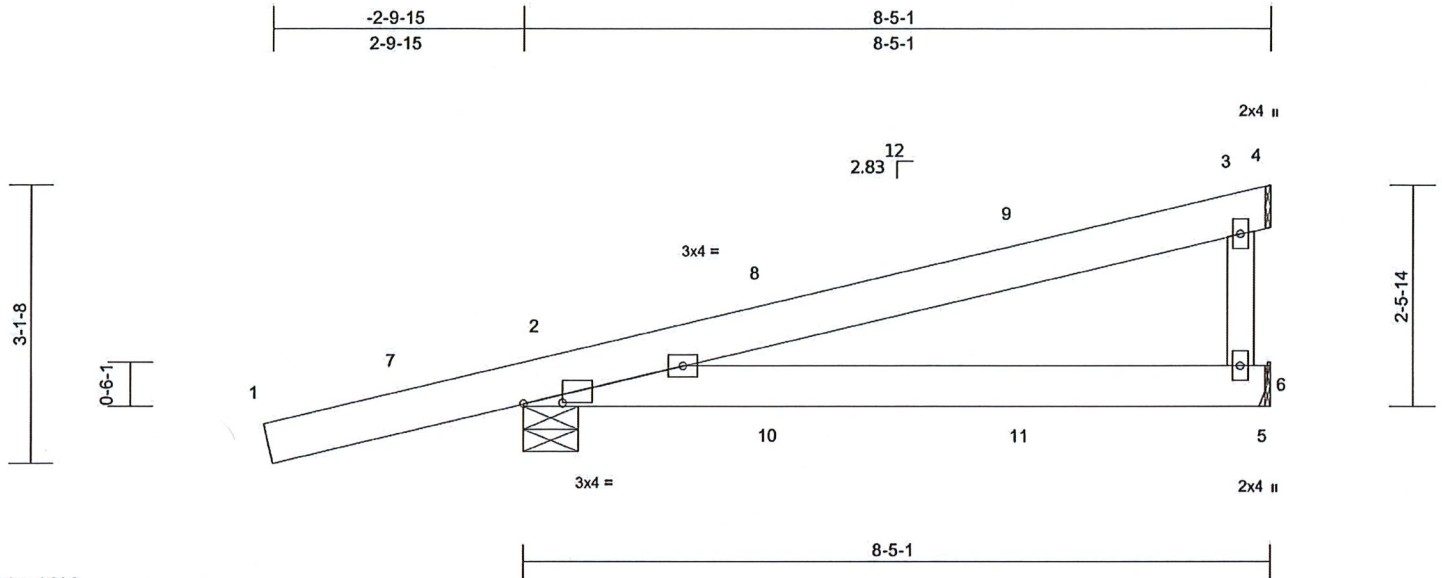
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988741
2001566	J01	Diagonal Hip Girder	6	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:13  
ID:2AIPKkxRmel?nep38Hbb3XyYk5m-QqeaQ2KyMVJBvWvOpBkCWkoVeUyQ16bDoZMayVl0q

Page: 1



Scale = 1:24.9

Plate Offsets (X, Y): [2:0-5-5,0-0-2]

<b>Loading</b>	(psf)	<b>Spacing</b>	2-0-0	<b>CSI</b>		<b>DEFL</b>	in	(loc)	I/defl	L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL	40.0	Plate Grip DOL	1.15	TC	0.56	Vert(LL)	-0.07	2-6	>999	240	MT20	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.14	2-6	>669	180		
TCDL	15.0	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 37 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x6 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 2=0-7-6, 5= Mechanical  
Max Horiz 2=124 (LC 6)  
Max Uplift 2=-212 (LC 6), 5=-57 (LC 10)  
Max Grav 2=1073 (LC 17), 5=575 (LC 17)

#### FORCES

(lb) - Maximum Compression/Maximum Tension  
TOP CHORD 1-7=0/34, 2-7=0/80, 2-8=-136/31, 8-9=-115/7, 3-9=-36/82, 3-4=-11/0, 3-6=-499/117  
BOT CHORD 2-10=0/0, 10-11=0/0, 6-11=0/0, 5-6=0/0

#### NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; Lumber DOL=1.33 plate grip DOL=1.33
- TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- Unbalanced snow loads have been considered for this design.
- This truss has been designed for greater of min roof live load of 20.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 212 lb uplift at joint 2 and 57 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 97 lb down and 302 lb up at 2-9-8, 97 lb down and 302 lb up at 2-9-8, and 109 lb down and 56 lb up at 5-7-7, and 109 lb down and 56 lb up at 5-7-7 on top chord, and 0 lb down at 2-9-8, 0 lb down at 2-9-8, and 20 lb down at 5-7-7, and 20 lb down at 5-7-7 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

#### LOAD CASE(S) Standard

- Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15  
Uniform Loads (lb/ft)  
Vert: 1-3=-110, 3-4=-110, 2-5=-20  
Concentrated Loads (lb)  
Vert: 8=124 (F=62, B=62), 9=-59 (F=-30, B=-30), 11=-18 (F=-9, B=-9)



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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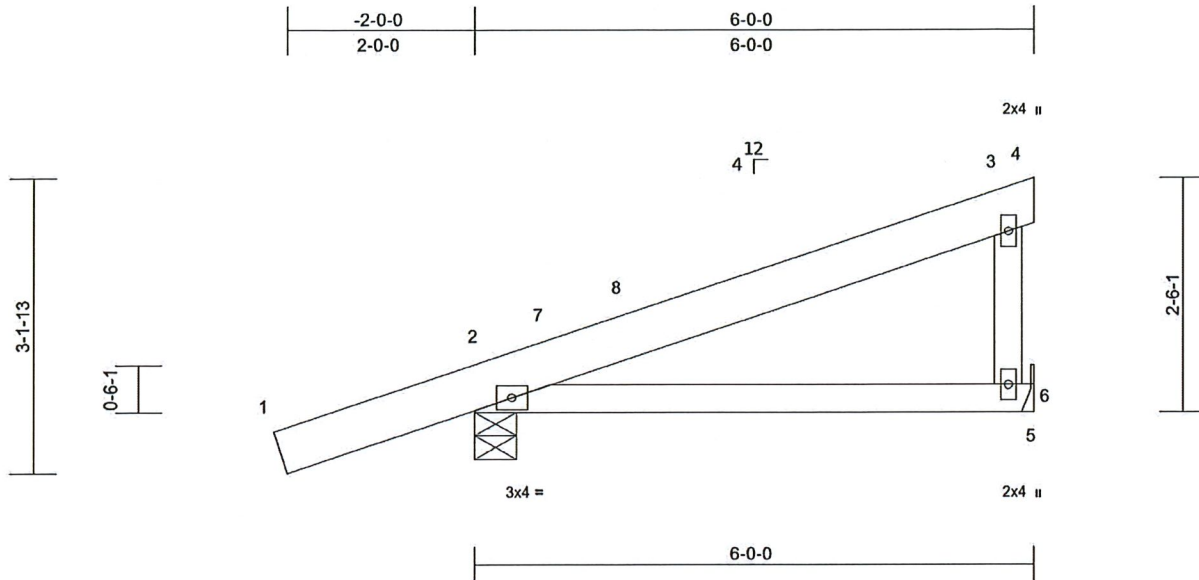
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988742
2001566	J02	Jack-Closed	21	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:13  
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Page: 1



Scale = 1:23.6

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	-0.05	2-6	>999	240	169/123
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.25	Vert(CT)	-0.10	2-6	>648	180	
TCDL	15.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	n/a	-	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P							
BCDL	10.0										
Weight: 24 lb FT = 20%											

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 6'-0" oc purlins, except end verticals.  
BOT CHORD Rigid ceiling directly applied or 10'-0" oc bracing.

#### REACTIONS

(size) 2=0-5-8, 6= Mechanical  
Max Horiz 2=124 (LC 10)  
Max Uplift 2=-164 (LC 10), 6=-61 (LC 14)  
Max Grav 2=898 (LC 21), 6=449 (LC 21)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/85, 2-7=-170/10, 7-8=-97/18,  
3-8=-90/91, 3-4=-13/0, 3-6=-388/231  
BOT CHORD 2-6=0/0, 5-6=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat.  
II; Exp C; Enclosed; Hip Roof; End Jack Truss; MWFRS  
(envelope) exterior zone and C-C Exterior(2E) -2-0-14 to  
0-11-2, Interior (1) 0-11-2 to 6-0-0 zone;C-C for  
members and forces & MWFRS for reactions shown;  
Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate  
DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0;  
Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this  
design.
- 4) This truss has been designed for greater of min roof live  
load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on  
overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom  
chord live load nonconcurrent with any other live loads.

- 6) \* This truss has been designed for a live load of 40.0psf  
on the bottom chord in all areas where a rectangle  
3'-06-00 tall by 2'-00-00 wide will fit between the bottom  
chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to  
bearing plate capable of withstanding 61 lb uplift at joint  
6 and 164 lb uplift at joint 2.
- 9) This truss is designed in accordance with the 2018  
International Residential Code sections R502.11.1 and  
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



REVIEWED FOR  
DESIGN CRITERIA  
ONLY  
October 8, 2020

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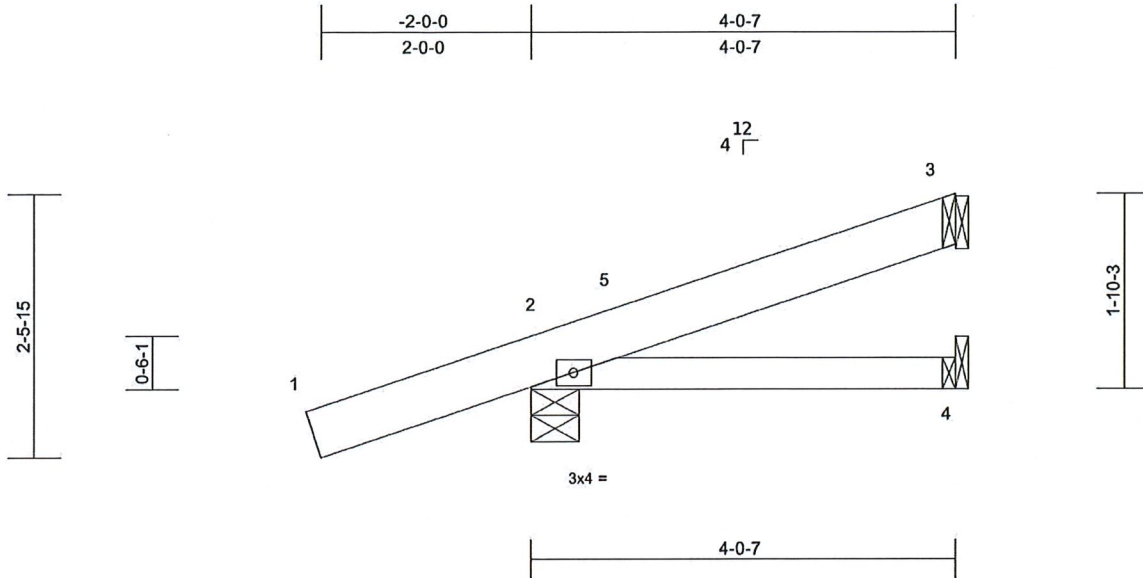
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job 2001566	Truss J03L	Truss Type Jack-Open	Qty 6	Ply 1	YAVAPAI COUNTY 2 BDRM Job Reference (optional)	R63988743
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Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:13  
ID:azB16Owp?Kd99UEtbZ4MXKyYk5n-QqeaQ2KyMVJBvWvOpBkCWktReXhQ16bDoZMayVl0q

Page: 1



Scale = 1:21

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.01	2-4	>999	240	MT20	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.02	2-4	>999	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 16 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=95 (LC 10)  
Max Uplift 2=164 (LC 10), 3=51 (LC 14)  
Max Grav 2=782 (LC 21), 3=178 (LC 21), 4=75 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/85, 2-5=-141/10, 3-5=-103/43  
BOT CHORD 2-4=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; End Jack Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 3-11-11 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

6) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

7) Refer to girder(s) for truss to truss connections.

8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 3 and 164 lb uplift at joint 2.

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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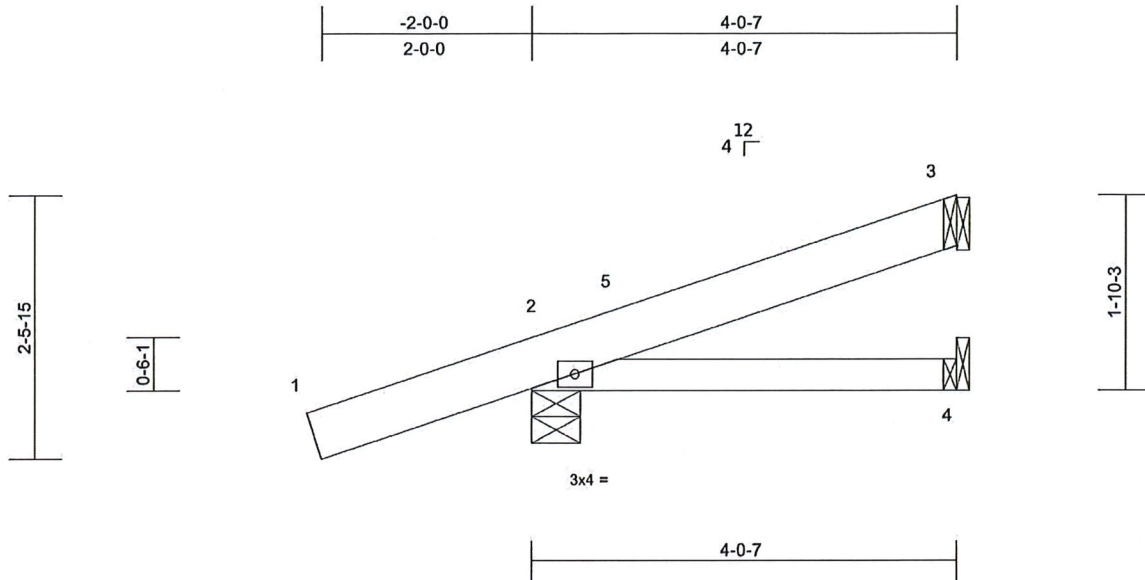
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988744
2001566	J03R	Jack-Open	6	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:13  
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Page: 1



Scale = 1:21

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.24	Vert(LL)	-0.01	2-4	>999	240	MT20	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.02	2-4	>999	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0										Weight: 16 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 3=Mechanical, 4=Mechanical  
Max Horiz 2=95 (LC 10)  
Max Uplift 2=-164 (LC 10), 3=-51 (LC 14)  
Max Grav 2=782 (LC 21), 3=178 (LC 21), 4=75 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/85, 2-5=-141/10, 3-5=-103/43  
BOT CHORD 2-4=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; End Jack Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 3-11-11 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

6) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

7) Refer to girder(s) for truss to truss connections.

8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 51 lb uplift at joint 3 and 164 lb uplift at joint 2.

9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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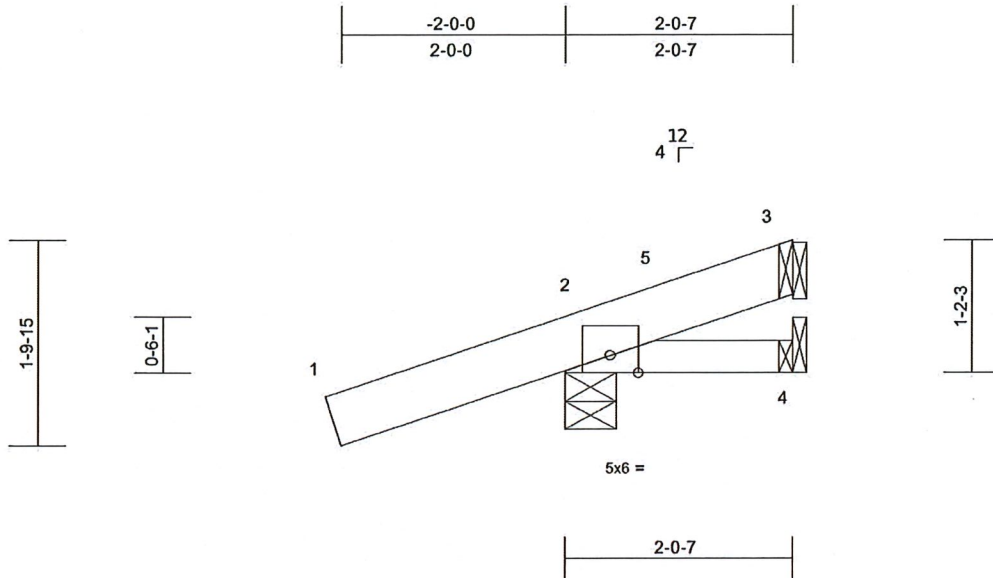
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job 2001566	Truss J04L	Truss Type Jack-Open	Qty 6	Ply 1	YAVAPAI COUNTY 2 BDRM Job Reference (optional)	R63988745
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Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:13  
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Page: 1



Scale = 1:19.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP	
TCLL	40.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	0.00	2-4	>999	240	MT20	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	2-4	>999	180		
TCDL	15.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P								
BCDL	10.0											
											Weight: 10 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-0-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 2=0-5-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=67 (LC 10)  
Max Uplift 2=-189 (LC 10), 3=-141 (LC 20)  
Max Grav 2=713 (LC 21), 3=40 (LC 10), 4=35 (LC 5)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/83, 2-5=-144/26, 3-5=-102/33  
BOT CHORD 2-4=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; End Jack Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 1-11-11 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 3 and 189 lb uplift at joint 2.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S)** Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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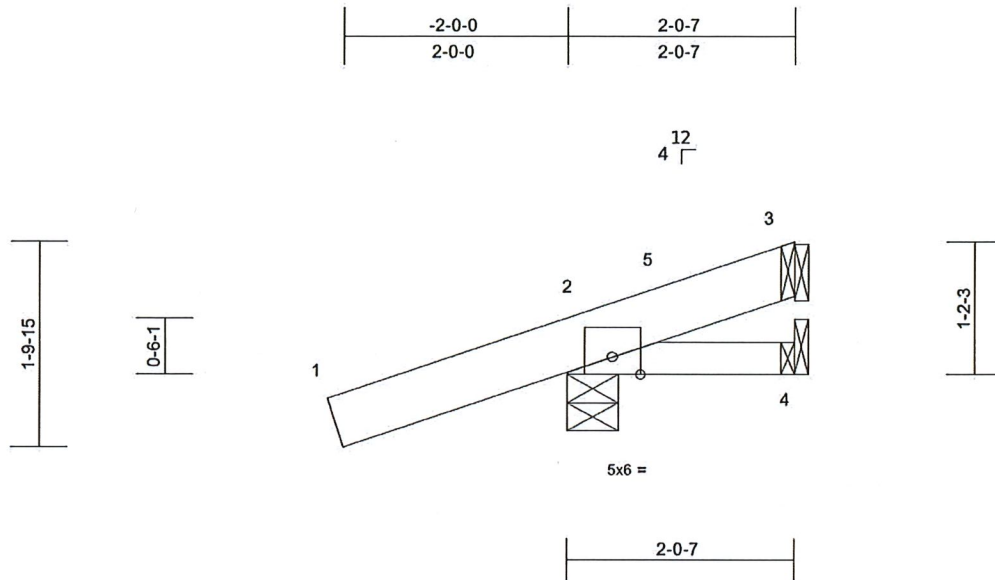
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988746
2001566	J04R	Jack-Open	6	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:13  
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Page: 1



Scale = 1:19.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.23	Vert(LL)	0.00	2-4	>999	240	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	2-4	>999	180	
TCDL	15.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P							
BCDL	10.0										
										Weight: 10 lb	FT = 20%

#### LUMBER

TOP CHORD 2x6 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 2-0-7 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 3= Mechanical, 4= Mechanical  
Max Horiz 2=67 (LC 10)  
Max Uplift 2=-189 (LC 10), 3=-141 (LC 20)  
Max Grav 2=713 (LC 21), 3=40 (LC 10), 4=35 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/83, 2-5=-144/26, 3-5=-102/33  
BOT CHORD 2-4=0/0

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; End Jack Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) -2-0-14 to 0-11-2, Interior (1) 0-11-2 to 1-11-11 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 16.0 psf or 1.00 times flat roof load of 40.0 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 6) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 141 lb uplift at joint 3 and 189 lb uplift at joint 2.
  - 9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S) Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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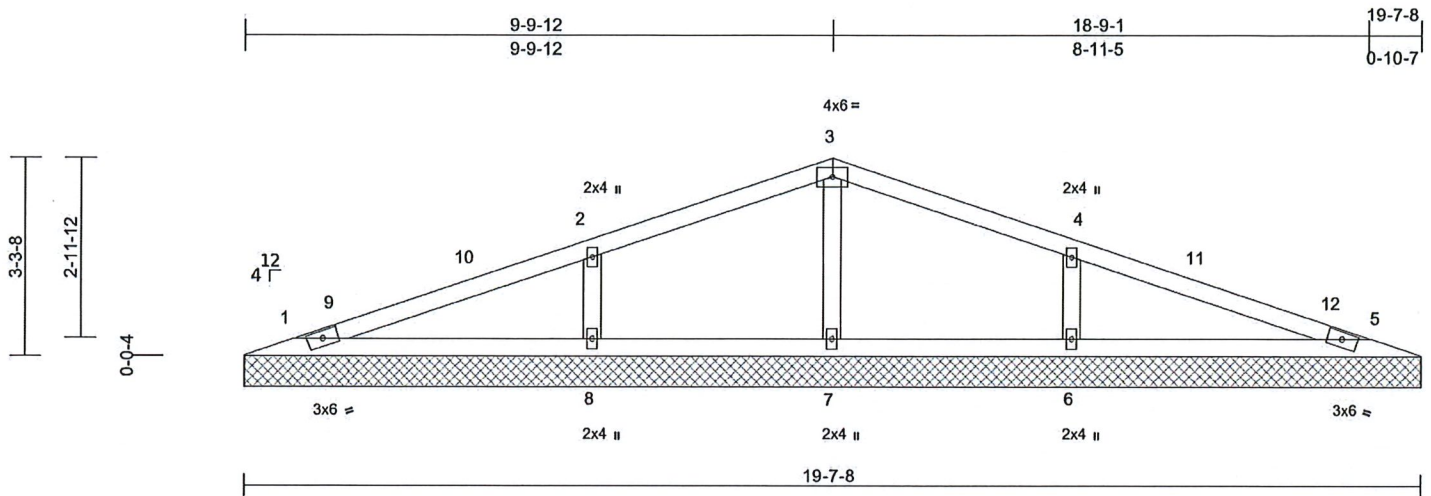
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988747
2001566	V01	Valley	1	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:14  
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Page: 1



Scale = 1:36.8

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	n/a	-	999	MT20	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	999		
TCDL	15.0	Rep Stress Incr	YES	WB	0.23	Horiz(TL)	0.00	5	n/a		
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH							
BCDL	10.0										
										Weight: 49 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E  
OTHERS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=19-7-8, 5=19-7-8, 6=19-7-8, 7=19-7-8, 8=19-7-8  
Max Horiz 1=56 (LC 15)  
Max Uplift 1=28 (LC 10), 5=34 (LC 11), 6=136 (LC 15), 8=136 (LC 14)  
Max Grav 1=319 (LC 20), 5=319 (LC 21), 6=948 (LC 21), 7=369 (LC 1), 8=948 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-9=-125/30, 9-10=-53/38, 2-10=-30/105, 2-3=-146/99, 3-4=-146/97, 4-11=-13/105, 11-12=-30/14, 5-12=-125/7

BOT CHORD 1-8=-8/45, 7-8=-8/45, 6-7=-8/45, 5-6=-8/45  
WEBS 3-7=-329/69, 2-8=-790/207, 4-6=-790/207

#### NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust)  
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Common Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-5 to 3-11-5, Interior (1) 3-11-5 to 9-10-8, Exterior(2R) 9-10-8 to 13-10-8, Interior (1) 13-10-8 to 18-9-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33

- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 28 lb uplift at joint 1, 34 lb uplift at joint 5, 136 lb uplift at joint 8 and 136 lb uplift at joint 6.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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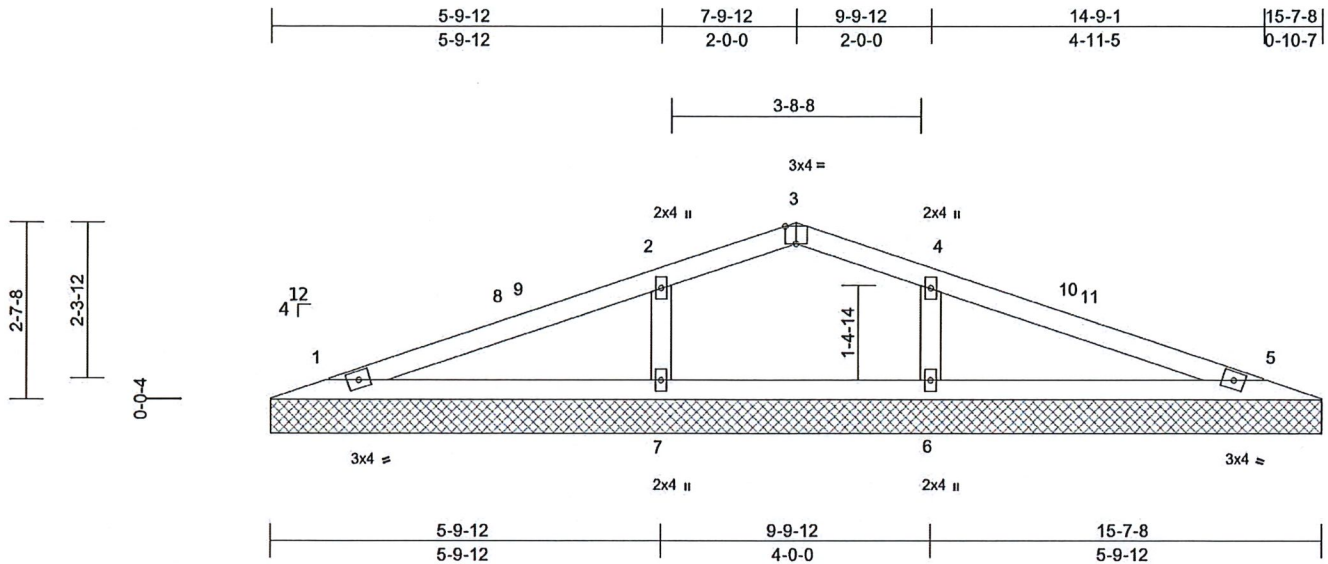
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988748
2001566	V02	Valley	1	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:14  
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Page: 1



Scale = 1:32.8

Plate Offsets (X, Y): [3:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	n/a	-	n/a	999	MT20
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.28	Vert(TL)	n/a	-	n/a	999	197/144
TCDL	15.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.00	5	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH							
BCDL	10.0										
Weight: 37 lb FT = 20%											

#### LUMBER

TOP CHORD 2x4 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E  
WEBS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

**REACTIONS** (size) 1=15-7-8, 5=15-7-8, 6=15-7-8, 7=15-7-8  
Max Horiz 1=43 (LC 15)  
Max Uplift 1=22 (LC 10), 5=23 (LC 11), 6=112 (LC 15), 7=114 (LC 14)  
Max Grav 1=340 (LC 20), 5=340 (LC 21), 6=864 (LC 21), 7=864 (LC 20)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-8=-82/41, 8-9=-72/48, 2-9=-71/157, 2-3=-70/30, 3-4=-70/30, 4-10=-70/157, 10-11=-71/48, 5-11=-82/41

BOT CHORD 1-7=-52/107, 6-7=-52/107, 5-6=-52/107  
WEBS 2-7=-715/229, 4-6=-715/229

#### NOTES

1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Common Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-5 to 3-11-5, Interior (1) 3-11-5 to 7-10-8, Exterior(2R) 7-10-8 to 12-1-7, Interior (1) 12-1-7 to 14-9-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33

- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 22 lb uplift at joint 1, 23 lb uplift at joint 5, 114 lb uplift at joint 7 and 112 lb uplift at joint 6.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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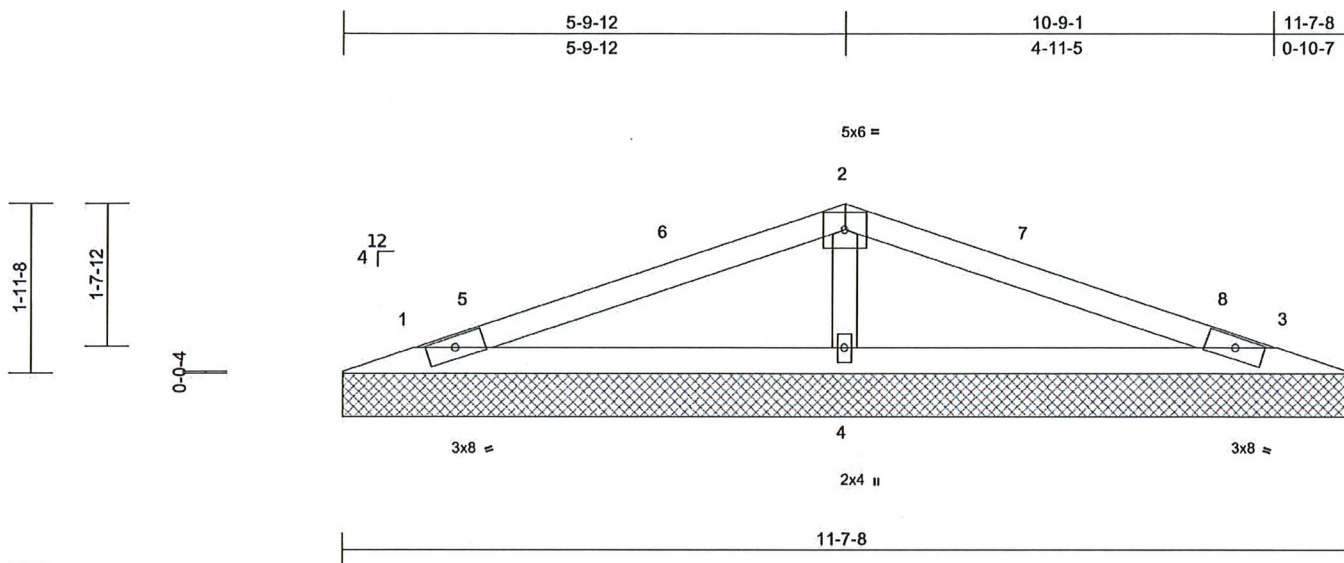
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988749
2001566	V03	Valley	1	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:14  
ID:NPgS9Yaz2NjNINDIXIhbBSyWSpg-u0CydOLa7oRMp355xWizlkH\_01ps9SISSXu0yVl0p

Page: 1



Scale = 1:25.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.51	Vert(LL)	n/a	-	n/a	999	MT20
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.37	Vert(TL)	n/a	-	n/a	999	197/144
TCDL	15.0	Rep Stress Incr	YES	WB	0.16	Horiz(TL)	0.00	3	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-SH							
BCDL	10.0										
Weight: 26 lb FT = 20%											

#### LUMBER

TOP CHORD 2x4 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E  
OTHERS 2x4 WW Stud/Std

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

**REACTIONS** (size) 1=11-7-8, 3=11-7-8, 4=11-7-8  
Max Horiz 1=31 (LC 14)  
Max Uplift 1=46 (LC 10), 3=-50 (LC 15), 4=-59 (LC 10)  
Max Grav 1=385 (LC 20), 3=385 (LC 21), 4=724 (LC 1)

**FORCES** (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-5=-168/46, 5-6=-48/53, 2-6=-28/71, 2-7=-28/71, 7-8=-48/50, 3-8=-169/43

BOT CHORD 1-4=-1/46, 3-4=-1/46  
WEBS 2-4=-519/223

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Common Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-11-5 to 3-11-5, Interior (1) 3-11-5 to 5-10-8, Exterior(2R) 5-10-8 to 10-1-7, Interior (1) 10-1-7 to 10-9-11 zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- 3) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 46 lb uplift at joint 1, 50 lb uplift at joint 3 and 59 lb uplift at joint 4.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

**LOAD CASE(S)** Standard



REVIEWED FOR DESIGN CRITERIA ONLY  
October 8, 2020

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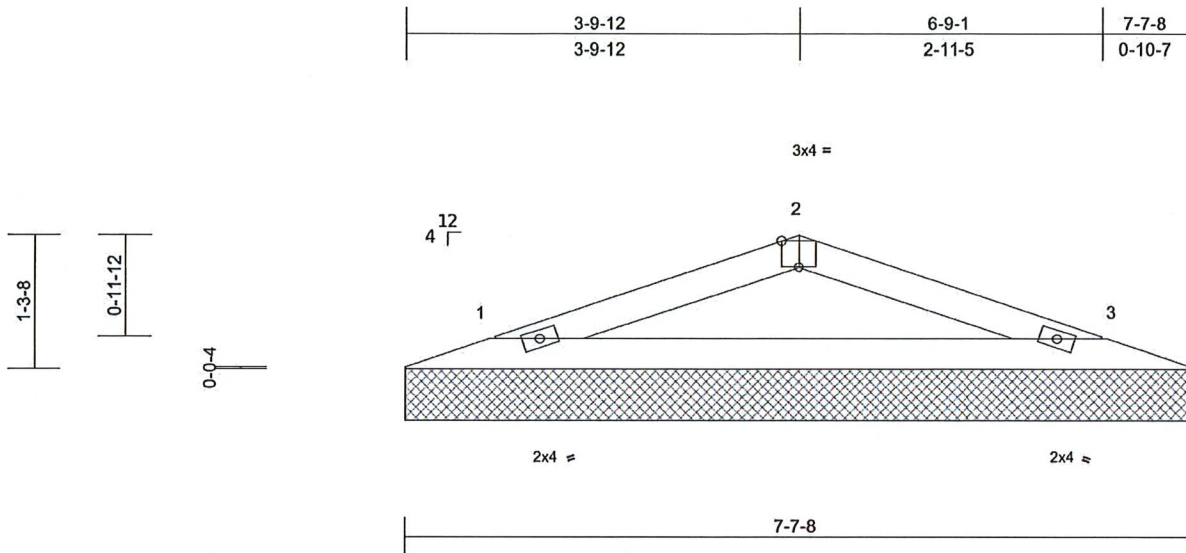
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988750
2001566	V04	Valley	1	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:14  
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Page: 1



Scale = 1:21.4

Plate Offsets (X, Y): [2:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.25	Vert(LL)	n/a	-	n/a	999	MT20
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.31	Vert(TL)	n/a	-	n/a	999	197/144
TCDL	15.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P							
BCDL	10.0										
Weight: 16 lb FT = 20%											

#### LUMBER

TOP CHORD 2x4 SPF 1650F 1.5E  
BOT CHORD 2x4 SPF 1650F 1.5E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.  
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=7-7-8, 3=7-7-8  
Max Horiz 1=19 (LC 18)  
Max Uplift 1=45 (LC 10), 3=45 (LC 11)  
Max Grav 1=412 (LC 20), 3=412 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-545/324, 2-3=-545/324  
BOT CHORD 1-3=-262/477

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Common Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.0; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 4-0-0 oc.

- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 45 lb uplift at joint 1 and 45 lb uplift at joint 3.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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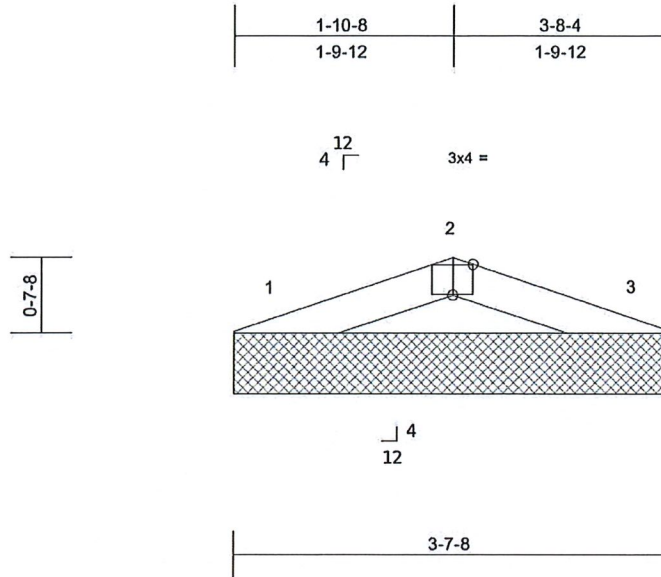
MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

Job	Truss	Truss Type	Qty	Ply	YAVAPAI COUNTY 2 BDRM	R63988751
2001566	V05	Valley	1	1	Job Reference (optional)	

Western Truss & Components, Flagstaff, AZ - 86004,

Run: 8.33 S Jul 22 2020 Print: 8.330 S Jul 22 2020 MiTek Industries, Inc. Wed Oct 07 16:53:15  
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Page: 1



Scale = 1:18.2

Plate Offsets (X, Y): [2:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	40.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	197/144
(Roof Snow = 40.0)		Lumber DOL	1.15	BC	0.00	Vert(TL)	n/a	-	n/a	999	
TCDL	15.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.01	3	n/a	n/a	
BCLL	0.0*	Code	IRC2018/TPI2014	Matrix-P							
BCDL	10.0										
										Weight: 4 lb	FT = 20%

#### LUMBER

TOP CHORD 2x4 SPF 1650F 1.5E

#### BRACING

TOP CHORD Structural wood sheathing directly applied or 3-9-0 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

#### REACTIONS

(size) 1=3-7-8, 3=3-7-8  
Max Horiz 1=9 (LC 14)  
Max Uplift 1=38 (LC 10), 3=38 (LC 11)  
Max Grav 1=156 (LC 20), 3=156 (LC 21)

#### FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=43/39, 2-3=43/39

#### NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=33ft; Cat. II; Exp C; Enclosed; Hip Roof; Common Truss; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.33 plate grip DOL=1.33
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) TCLL: ASCE 7-16; Pf=40.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10
- 4) Unbalanced snow loads have been considered for this design.
- 5) Gable requires continuous bottom chord bearing.
- 6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- 7) Gable studs spaced at 4-0-0 oc.

- 8) \* This truss has been designed for a live load of 40.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 38 lb uplift at joint 1 and 38 lb uplift at joint 3.
  - 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- LOAD CASE(S) Standard



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October 8, 2020

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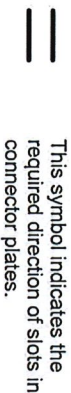
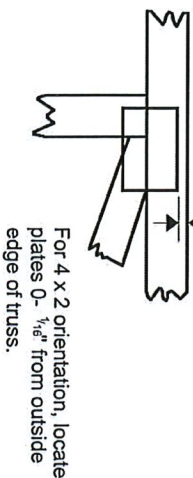
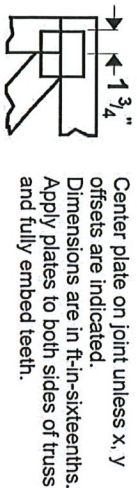
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



MiTek USA, Inc.  
400 Sunrise Avenue, Suite 270  
Roseville, CA 95661

# Symbols

## PLATE LOCATION AND ORIENTATION

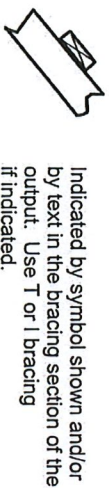


\* Plate location details available in MITek 20/20 software or upon request.

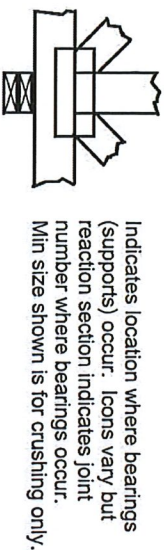
## PLATE SIZE

4 X 4  
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



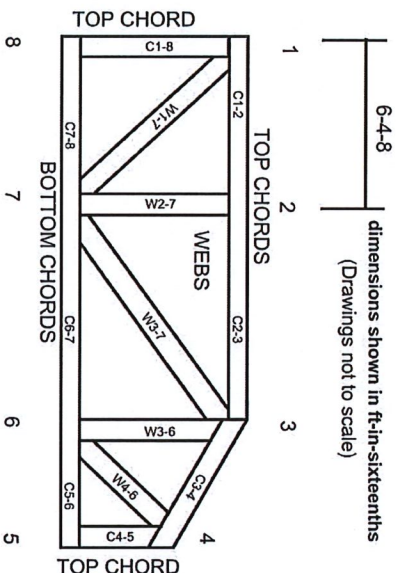
## BEARING



## Industry Standards:

ANSI/TP11: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

## PRODUCT CODE APPROVALS

ICC-ES Reports:  
ESR-1311, ESR-1352, ESR1988  
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

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MITek Engineering Reference Sheet: MII-7473 rev. 5/19/2020

# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI
2. Truss bracing must be designed by an engineer for wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

